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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,985	09/19/2001	Harald Berndt		3574

26418 7590 06/27/2003

REED SMITH, LLP  
ATTN: PATENT RECORDS DEPARTMENT  
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EXAMINER

FULLER, RODNEY EVAN

ART UNIT PAPER NUMBER

2851

DATE MAILED: 06/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/831,985	BERNDT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rodney E Fuller	2851	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☒ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                            | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on September 17, 1999. It is noted, however, that applicant has not filed a certified copy of the 199-44-650.4 application as required by 35 U.S.C. 119(b).

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phrasology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the phrase "A device is disclosed..." can be implied. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 17-20 and 25-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Otsuka, et al. (US 5,367,163).

Regarding claim 17, Otsuka discloses "a tubular furnace (Fig. 2, ref.# 1) which has a flame-heated (Fig. 2, ref.# 3) tube; an arrangement for introducing a sample into the tube (Fig. 2, ref.# 23, 49); said tube having a sample inlet opening to which a capillary leads (Fig. 2, ref.# 23); said capillary being flame-heated at its end facing the tube along with the tube; and a pump (Fig. 2, ref.# 42) being provided for delivering a sample through the capillary; said sample being partially or completely evaporated in the capillary acting as thermospray and flowing into the tube in this state."

Regarding claim 18, Otsuka discloses "wherein the capillary and the tube are fixedly connected mechanically with one another." (Fig. 2, ref.# 23)

Regarding claim 19, Otsuka discloses "wherein the capillary is connected with an additional heating source." (column 2, line 20)

Regarding claim 20, Otsuka discloses "wherein the burner head, tube and capillary are positioned with respect to one another in such a way that the tube is heated along its entire length and the capillary is heated at its end facing the tube." (Fig. 2, ref.# 23)

Regarding claim 25, Otsuka discloses "wherein the flame heating is carried out by means of a burner head which is constructed as a slit burner." (Fig. 2, ref.# S1)

Regarding claim 26 and 27, Otsuka discloses "wherein the pump is constructed as a continuously pumping peristaltic single-channel or multi-channel pump, as a gas pressure pump, piston pump or diaphragm pump." (Fig. 2, ref. # 42)

Regarding claim 28, Otsuka discloses "wherein a sample feed device in the form of a manual sample feed valve or a sample changer with an automatic sample feed valve is arranged between the pump and capillary." (Fig. 2, ref.# 41)

Regarding claim 29, Otsuka discloses wherein a sample changer is provided on the suction side of the pump." (Fig. 2, ref.# 41, 42)

Regarding claim 30, Otsuka discloses "wherein a partition column or enrichment column is arranged between the sample feed device (Fig. 2, ref.# 41) and the capillary (Fig. 2, ref.# 23)."

Regarding claim 31, Otsuka discloses "wherein the flame-heated tube of the tubular furnace has, besides the sample inlet opening and two end openings, at least one additional opening which is oriented in the direction of the burner slit." (Fig. 2, ref.# 1)

Regarding claim 32, Otsuka discloses "wherein the flame-heated tube has, besides the sample inlet opening and two end openings, at least one additional opening facing away from the burner slit." (Fig. 2, ref.# 1)

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka, et al. (US 5,367,163).

Regarding claim 21, Otsuka discloses all the structure set for in the claims except "wherein the capillary is constructed with an inner diameter of between 0.02 mm and 2 mm." It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a capillary "with an inner diameter of between 0.02 mm and 2 mm," since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 22-24, Otsuka discloses all the structure set forth in the claims except (claim 22) "wherein the capillary comprises an extensively chemically resistant and temperature-resistant metal, an extensively chemically resistant and temperature-resistant metal alloy, ceramic and/or silica glass," (claim 23) "wherein the capillary is constructed cylindrically and has an inner cylinder jacket comprising ceramic or silica glass and an outer cylinder jacket comprising metal or a metal alloy," and (claim 24) "wherein the flame-heated tube of the tubular furnace comprises an extensively chemically resistant and temperature-resistant metal, an extensively chemically resistant and temperature-resistant metal alloy, ceramic and/or silica glass." In other words, Otsuka does not disclose the material from which the capillary and the tube of the furnace are made. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select materials such that "wherein the capillary comprises an extensively chemically resistant and temperature-resistant metal, an extensively chemically resistant and temperature-resistant metal alloy, ceramic and/or silica glass," "wherein the capillary is constructed cylindrically and has an inner cylinder jacket comprising ceramic or silica glass and an outer cylinder jacket comprising metal or a metal

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alloy," and "wherein the flame-heated tube of the tubular furnace comprises an extensively chemically resistant and temperature-resistant metal, an extensively chemically resistant and temperature-resistant metal alloy, ceramic and/or silica glass;" since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

### ***Conclusion***

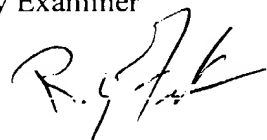
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Targowski, et al. (US 4,220,413), Venghiattis (US 4,125,225), George (US 3,806,250), Rendina (US 3,516,771), and Boling, et al. (US 3,525,476) each discloses a device for atomizing liquid samples for spectroscopic measurements.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Fuller whose telephone number is (703) 306-5641. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams, can be reached on (703) 308-2847.

Rodney Fuller  
Primary Examiner



June 25, 2003